

What is claimed  
claims

1. A method in a cellular communication system for reporting cell measurement results associated with cells of the system from a transceiver station via a radio interface between the transceiver station and a cell serving the transceiver station, comprising:

defining a reporting order of the cells to be used by the transceiver station for reporting;

performing cell measurements at the transceiver station for getting cell measurement results associated with at least some of the cells;

selecting relevant cell measurement results from the performed cell measurements; and

reporting the cell measurement results from the transceiver station in the defined reporting order.

2. A method according to claim 1, wherein the measurement results are reported by information symbol strings containing a plurality of information symbols, the method further

comprising a step of including an indication symbol into the measurement report string for indicating whether the following predefined number of symbols in the string includes the cell measurement results of a subsequent cell in the reporting order of the cells or whether the subsequent cell will not be reported in the measurement report string.

3. A method according to claim 2, wherein, in the event that the cell measurement indication symbol indicates that it will not be followed by symbols reporting the measurement results, the following symbol included in the measurement report string is a further indication symbol designated for a cell following the subsequent cell in the reporting order of the cells.

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6 (49

(49) - 7(5)

7(1-2)

Sub 9.1

4. A method according to any of the preceding claims,<sup>1</sup>  
 comprising further steps of receiving predefined information  
 about the cells to the measured at the mobile station, and  
 5 defining the reporting order based on said received  
 information.

$\Sigma(13-15)$   
 signal level =  
 predefined Info

5. A method according to claim 4, wherein said information  
 comprises frequency of a broadcasting control channel and the  
 10 identity of a transmitting base station of the cell to be  
 measured.  $\Sigma(10-14)$

Sub 9.2

6. A method according to claim 4 ~~or 5~~, wherein at least  
 part of the information is transmitted in a separate message  
 15 via the broadcasting control channel.  $\Sigma(11-12)$

7. A method according to any of the preceding claims,<sup>1</sup>  
 further comprising a step of associating each of the reported  
 measurement results with respective cells at a control node of  
 20 the cellular communication system.  $\Sigma(9-20)$

8. A method according to any of the preceding claims,<sup>1</sup>  
 wherein the reported cell measurement result for a cell  
 comprises signal level of a radio signal received at the  
 25 transceiver station.  $\Sigma(14-15)$

9. A method according to any of the preceding claims,<sup>1</sup>  
 wherein the reporting order is defined and the cell  ~~$\Sigma(39-45)$~~   $\Sigma(51-55)$   
 measurements are performed at the transceiver station for  
 30 cells other than the serving cell.  ~~$\Sigma(20-39)$~~   $\Sigma(12-14)$

preterminal period = defined

*Indicates*

10. A method according to any of the preceding claims, wherein the reporting order is based on the information received from the serving cell. 4(36-47)

5 11. A method according to any of the preceding claims, wherein rules for defining the reporting order are stored at the transceiver station. 2(3-7)

10 12. A method according to any of the preceding claims, comprising a step of transmitting rules for the reporting order to the transceiver station via the radio interface. 2(51-55)

15 13. <sup>16</sup> A method according to any of the preceding claims, comprising a step of changing rules for defining the reporting order. 6(36-41) *changing = updated*

14. <sup>15</sup> A method according to any of the preceding claims, wherein rules for selecting the relevant other cells are stored at the transceiver station. 2(3-14)

20 15. A method according to any of the preceding claims, comprising a step of transmitting rules for the selection of relevant cells to the transceiver station via the radio interface.

25 16. <sup>17</sup> A method according to any of the preceding claims, comprising a step of changing the rules for the selection of the relevant cells. 4(41-42)

30 17. A method according to any of the preceding claims, wherein the transceiver station sends the communication system information of the rules used for generating the cell measurement report.



cells or whether the subsequent cell will not be reported in the string.

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23. A cellular communication system according to claim 22, wherein, in the event that the cell measurement indication symbol is for indicating that it will not be followed by symbols reporting the measurement results, the following symbol in the measurement report string is a further indication symbol designated for a cell following the subsequent cell in the reporting order of the cells.

24. A cellular communication system according to any of the claims 20 to 23, wherein the transceiver station is arranged to receive predefined information associated with at least some of the further cells for use in defining the reporting order of the further cells.

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25. A cellular communication system according to claim 24, wherein the information comprises the frequency of a broadcasting control channel and the identity of a transmitting base station of the cell to be measured.

26. A cellular communication system according to any of the claims 20 to 25, further comprising a control node including means for associating measurement results with corresponding cells based on the reporting order.

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27. A mobile station for use in a cellular communication system comprising control means for performing cell measurements concerning cells of the system, control means for defining a reporting order of the measurement results, control means for selecting relevant cell measurement results from the performed cell measurements, and control means for generating

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a report message reporting the cell measurement results in the defined reporting order.

28. A mobile station according to claim 27, said mobile station being arranged to operate in at least two different cellular network systems.

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29. A mobile station according to claim 27 ~~or 28~~ being further arranged to receive predefined information associated with at least some of the further cells for use in defining the reporting order of the further cells.

30. A network node of a cellular communication system comprising means for receiving cell measurement results from a station communicating with one of the cells of the system, said measurement results being associated with a plurality of cells of the communication system and being reported from the station in a reporting order of the cells defined by the station, control means for defining the reporting order used by the station for the reporting and control means for attaching measurement results to cells based on the reporting order.